

# PTSD Symptom Patterns of Public Safety Personnel: Associations with Sex and Occupation

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## Introduction

- Public safety personnel (PSP; e.g., paramedics, police officers, correctional workers) are regularly exposed to traumatic events that can lead to symptoms of posttraumatic stress disorder (PTSD; Haugen et al., 2012). Prevalence rates of PTSD appear to be higher among PSP than in the general population (Carleton et al., 2017).
- PTSD rates differ by PSP occupation and sex (Carleton et al., 2017).
  - Royal Canadian Mounted Police (RCMP) officers, who serve as Canada's national police service, and correctional workers have the highest rates of positive screens for PTSD among all PSP.
  - Female municipal and provincial police officers, and fire and rescue workers screen positive for PTSD at rates higher than their male counterparts.
- Despite differences in PTSD rates by PSP occupation and sex, researchers have not examined the impact of such factors on PTSD symptom reporting. The current study was designed to examine whether the PSP occupation and sex/gender influence overall PTSD symptom severity and PTSD symptom profile.

## Methods

### Participants and Measures

- Participants included 5546 Canadian PSP who self-reported sex, gender, and occupation.
  - PSP occupations were divided into six more general occupational categories; specifically, fire and rescue workers ( $n = 844$ ), paramedics ( $n = 817$ ), municipal/provincial police ( $n = 1416$ ), RCMP ( $n = 1425$ ), dispatchers ( $n = 278$ ), and correctional workers ( $n = 766$ ).
  - Participants who reported occupations not included in these categories (e.g., Canadian Border Security, Coast Guard) were excluded from analysis due to a limited number cases.
- Participants were 31.8% female ( $n = 1764$ ), with a mean age of 44.20 ( $SD = 9.32$ ).
  - Few participants did not report the same sex and gender ( $n = 29$ ).
  - Participants completed the PTSD Checklist for *DSM-5* (PCL-5; Weathers et al., 2013;  $M = 21.38$ ,  $SD = 18.83$ ). PCL-5 items were used to create standardized subscale scores that reflected *DSM-5* PTSD symptom clusters (i.e., reexperiencing, avoidance, hyperarousal, and negative alterations in cognition and mood; APA, 2013).

### Analyses

- A one-way ANOVA was used to evaluate whether the interaction between PSP occupation and sex influenced PTSD symptom severity.
- Profile analyses were used to compare PTSD symptom clusters for men and women within each PSP occupation.
- Independent samples *t*-tests were used to evaluate differences between men and women within the same occupation on symptom cluster scores.
- Results did not differ depending on whether sex or gender was examined; therefore, only the statistics for analyses examining sex are reported here.

Figure 1. PTSD symptom profiles for fire and rescue workers and paramedics by sex.

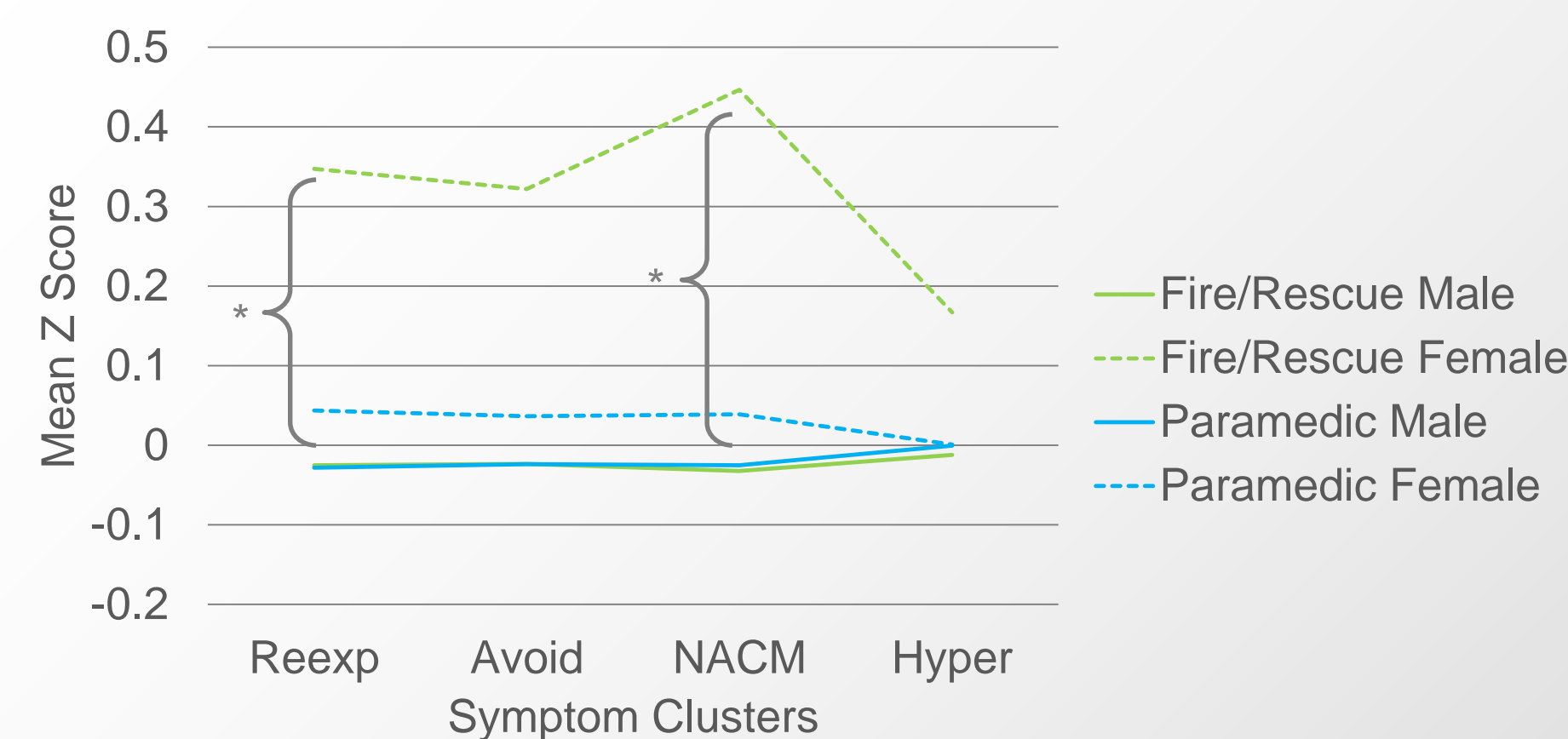


Figure 2. PTSD symptom profiles for provincial and municipal police officers and RCMP officers by sex.

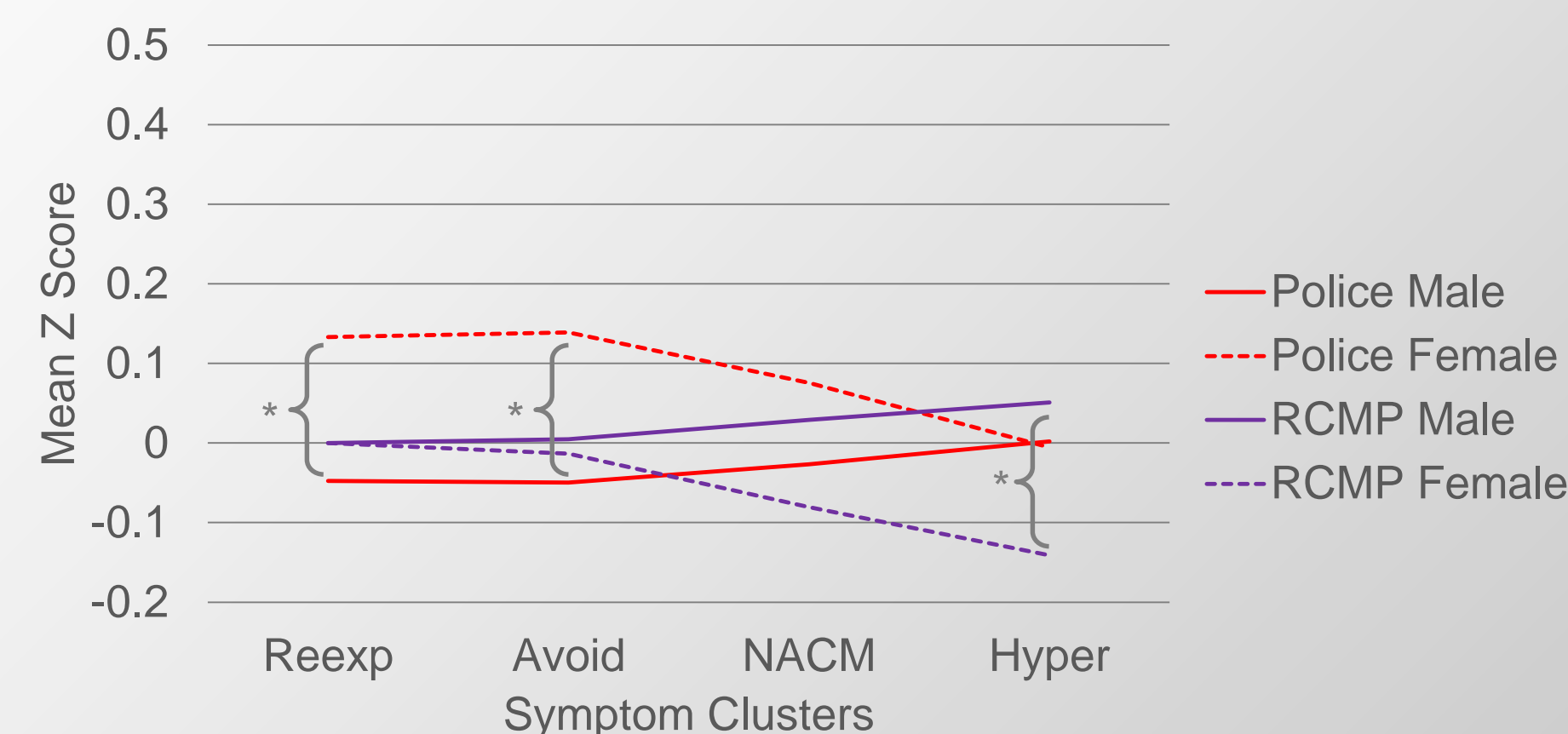
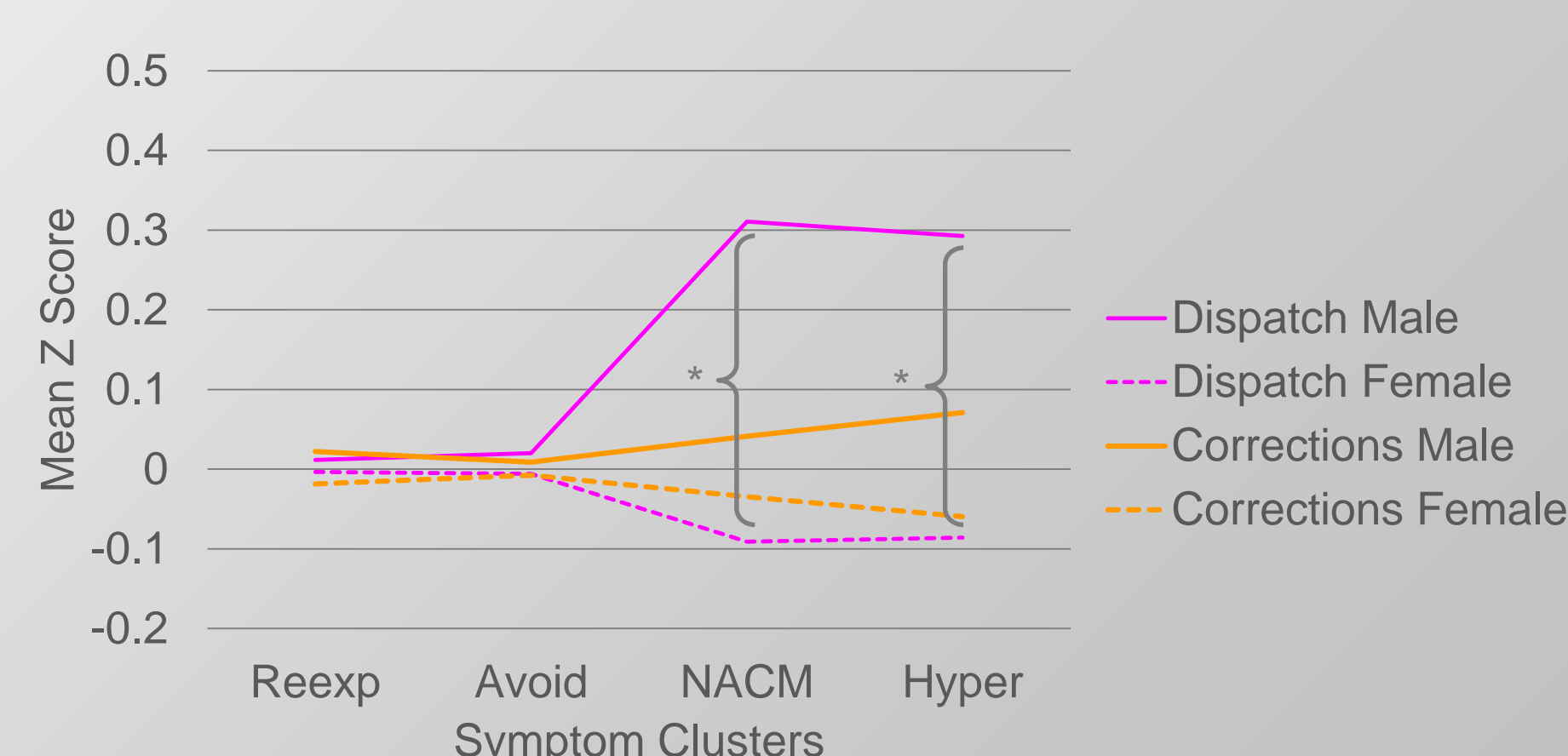


Figure 3. PTSD symptom profiles for dispatchers and correctional workers by sex.



Note. Reexp = reexperiencing; Avoid = avoidance; NACM = negative alterations in cognition and mood; Hyper = hyperarousal. Asterisks (\*) denote significant differences in symptom cluster scores between men and women of the same occupation ( $p < .05$ ).

## Results

### One-way ANOVA: Does the interaction between PSP occupation and sex influence PTSD symptom severity?

- There was a significant interaction between PSP occupation and sex on PTSD symptom severity,  $F(5, 5534) = 3.663$ ,  $p = .003$ ,  $\eta_p^2 = .003$ .

### Profile analyses: Do men and women within the same occupation display different PTSD symptom profiles?

- Among fire and rescue workers, and police officers, there were significant main effects of sex such that women reported more severe symptoms ( $ps \leq .034$ ).
- There was no significant main effect of symptom cluster among any of the profile analyses ( $ps \geq .087$ ).
- Among police officers, RCMP officers, and dispatchers, there were significant sex by symptom cluster interactions ( $ps \leq .000$ ).

### Independent samples *t*-tests: Within each occupation, do men and women differ on the reported levels of each symptom cluster?

- Compared to male fire and rescue workers, females reported significantly more reexperiencing and negative alterations in cognition and mood ( $ps \leq .043$ ).
- Female police officers reported reexperiencing and avoidance significantly more often than male police officers ( $ps \leq .004$ ).
- Male RCMP officers reported significantly more hyperarousal compared to female RCMP officers ( $p = .001$ ).
- Compared to female dispatchers, male dispatchers reported significantly more negative alterations in cognition and mood and hyperarousal ( $ps \leq .025$ ).

## Discussion

- The results of the current study suggest that the PTSD symptom profiles of PSP differ according to occupation and sex/gender.
  - Among fire and rescue workers, and municipal and provincial police officers, females reported more severe PTSD symptoms overall.
  - Among police officers, RCMP officers, and dispatchers, sex/gender was associated with significant differences in PTSD symptom profiles.
- Differential PTSD symptom profiles may reflect the strategies PSP employ to cope with trauma and willingness to report symptoms of PTSD.
- Further research may:
  - Elucidate underlying differential risk and resiliency factors for men and women.
  - Investigate the PTSD symptom patterns of individuals who are not cisgender to determine whether sex and biology or gender and socialization have a greater influence on PTSD symptoms patterns.
- The current results can be used to inform the design of more targeted PTSD interventions that account for sex and gender of PSP, which may ultimately improve treatment outcomes.

